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ABSTRACT

This paper focuses on an approach to instructional development that consists of three basic stages interrelated by feedback. The first stage, system definition and management, is an exhaustive effort to define the problem, study the existing instructional context, and determine staff support and management controls. Stage two, design analysis and development, results in the development of precise specifications for the messages and the strategies thought to be most appropriate to the resolution of the learning problem and the construction of an instructional prototype. The third stage, prototype tryout and assessment, includes field testing the developed prototype with a representative sample of the target population. During the field test, evaluation data are compiled, which are the basis for the refinement or abandonment of the prototype. (A 5-item annotated bibliography and diagrams illustrating the approach conclude this paper.) (PD)

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Instructional Development: An Overview
(An Informal Paper)

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This paper is focused on an approach which has demonstrated tremendous power in creating improved designs for instructional problems. It may well be that some readers may find a more generalizable character in the approach being presented, but the essential intention of this approach is to assist in the resolution of problems related to student learning.

Some students learn on their own, regardless of their environment, but most are dependent on their teachers and the instructional organization of the school. The key to successful instructional programs always depends on the ability of teachers, administrators, and concerned citizens to use their resources wisely. Studies of successful instructional programs always reveal this cooperative network of people, facilities and resources.

In the past few years, this common sense notion of planning and cooperation has generally become known as instructional development. Instructional development is a simple idea but it requires a lot of organization to create it. Instructional development consists of three design stages: I. Systems Definition and Management, II. Systems Analysis and Development, and III. Prototype Tryout and Assessment (Figure 1).

These three stages are all inter-related by the process called feedback. Feedback is the process built into the system which allows the people who designed, or used, or who were taught by the system to provide information about how well it works or doesn't work. Feedback, when working properly, is the readiness of people involved to plan for adjusting and changing the instructional system as it is being developed. Feedback helps to uncover trouble spots or confounding factors in the instructional design. Feedback is the dynamic which keeps instructional development flexible and adapting. It is personal and involves a selective process to direct the right information to the right people at the right time.

Each of the basic design stages (Systems definition and Management, Systems Analysis and Development and Prototype Tryout and Assessment) contains three major design areas. These nine Areas of Instructional Development are presented in Figure 2.

Each of the nine areas of instructional development can be further subdivided into elements. Figure 3 presents the 22 elements in a flow diagram which also presents a reasonable linear flow and indicates

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particularly critical check points in the process of developing instructional systems. The system proposed in this paper contains the nine design elements illustrated in Figure 2.

The system definition and management stage is an exhaustive effort to define clearly and succinctly what is. The felt problem is defined, staff support and management controls determined and the existing instructional context is thoroughly studied.

The Design Analysis and Development Stage depends on the information gathered in stage one and begins by stating objectives and measures. These objectives are then analyzed in term of the types of learning required, the conditions that might bring about that learning, accomodation of individual differences and the flow of each instructional event. The net result of design stage two is the development of very precise specifications for the messages and the strategies thought to be most appropriate to the resolution of the learning problem and the construction of an instructional prototype.

An assessment of the individual elements of the prototype have been conducted as they were produced during the development phases, the third stage, Prototype Tryout and Assessment, is concerned with evaluating the complete package. The third design stage then, begins by field testing the developed prototype with a representative sample of the target population. During the field test evaluation data is compiled. The data is then analyzed and the results obtained which provide the basis for determining refinement or abandonment of the prototype.

Instructional development technigues can be presented as a general model. Models always have reasonable clean rationale and the appearance of possessing very clear cut approaches. Unfortunately, few instructional problems ever fit the model precisely. Instructional development is based on a network of people--resources--and facilities. Local variation in time, energy and resources can make it impossible to follow the proposed model. It is at this point that instructional development must depend on the judgment of the people involved. In a sense, instructional development is common sense by design, but to most people who have directed an instructional development effort, instructional developmental models provide an "un-common" approach. The model assumes that all design elements are at least attended to. Many efforts in instructional improvement have been ultimately destroyed by lack of attention to some essential component.

A Brief Review of the Basic Nine Instructional Development Areas

1. Defining the Instructional Problem

Instructional development activities usually begin with some group or something who can identify an instructional problem they are concerned about. This concern, no matter how simply expressed is the starting point. The end is another matter. As more and more is learned about the problem, by a sequent study and analysis, the problem definition will go through many revisions. Many related sub-problems will come to light. The decisions to include or to exclude particular problem elements contribute to creating sharper definitions of the instructional problem.

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The checklist utilized during this phase of the planning process is designed to provide a comprehensive profile of the environmental problem. The information gathered in considering these basic elements includes a comprehensive analysis of the problem and a determination of behaviors which can be taken into account when the problem is ultimately engineered.

The initial orientation of the instructional staff as to a single statement of what is instructional development should be viewed as a process. Instructional development does proceed in systematic planning and analysis to determine what we should like to have.

2. Analyzing the Training Setting

In this step of the instructional problem, the primary objective is analyzing the training setting to be utilized as well as the behavioral goals that are to be provided.

(1) Who is the target audience? How large is it and how much variation among individuals does there seem to be?

(2) A second element in this design area is to collect materials and books which represent the most the content or curriculum area with which [illegible] course outline, texts, media materials, activities, etc.

(3) A third element is to look at the instructional setting. The classroom environment within which instruction must be the instructional program should be examined and analyzed. In the design analysis stage, the information gathered will be useful information material in determining what, if any, modifications are essential to the successful implementation of proposed instructional prototype.

All materials and information relevant to the instructional problem must be located, collected and/or made accessible to the instructional development team. Creation of a workable solution that provides for efficient use of available resources and facilities is a major step towards creating instructional practice which can maintain itself.

3. Defining the Staff and Management Controls

One of the most critical points in instructional development is to define the staff and the management controls which have a bearing on the actual problem. This design area has decision and other components of a prepare its of people, time, energy and money to run based. Faculty analysis in this area alone has fostered many interaction which attempts to improve instruction. The users and influence of groups inside of the system and outside of the system must receive balanced attention.

Inside the school the basic considerations are to achieve a control of responsibility. Controlled responsibility is a common situation in which the instructional development team and staff "contract", from outside the system, have who is charged to accomplish it. A and what responsibilities of services are available to develop the instructional prototype. Clerical support, finances, available equipment, facilities, etc., will require careful identification or [illegible] instructional solutions can later be proposed.

[illegible]

FEEDBACK